SOUTH CAROLINA'S **COMPETITIVE**

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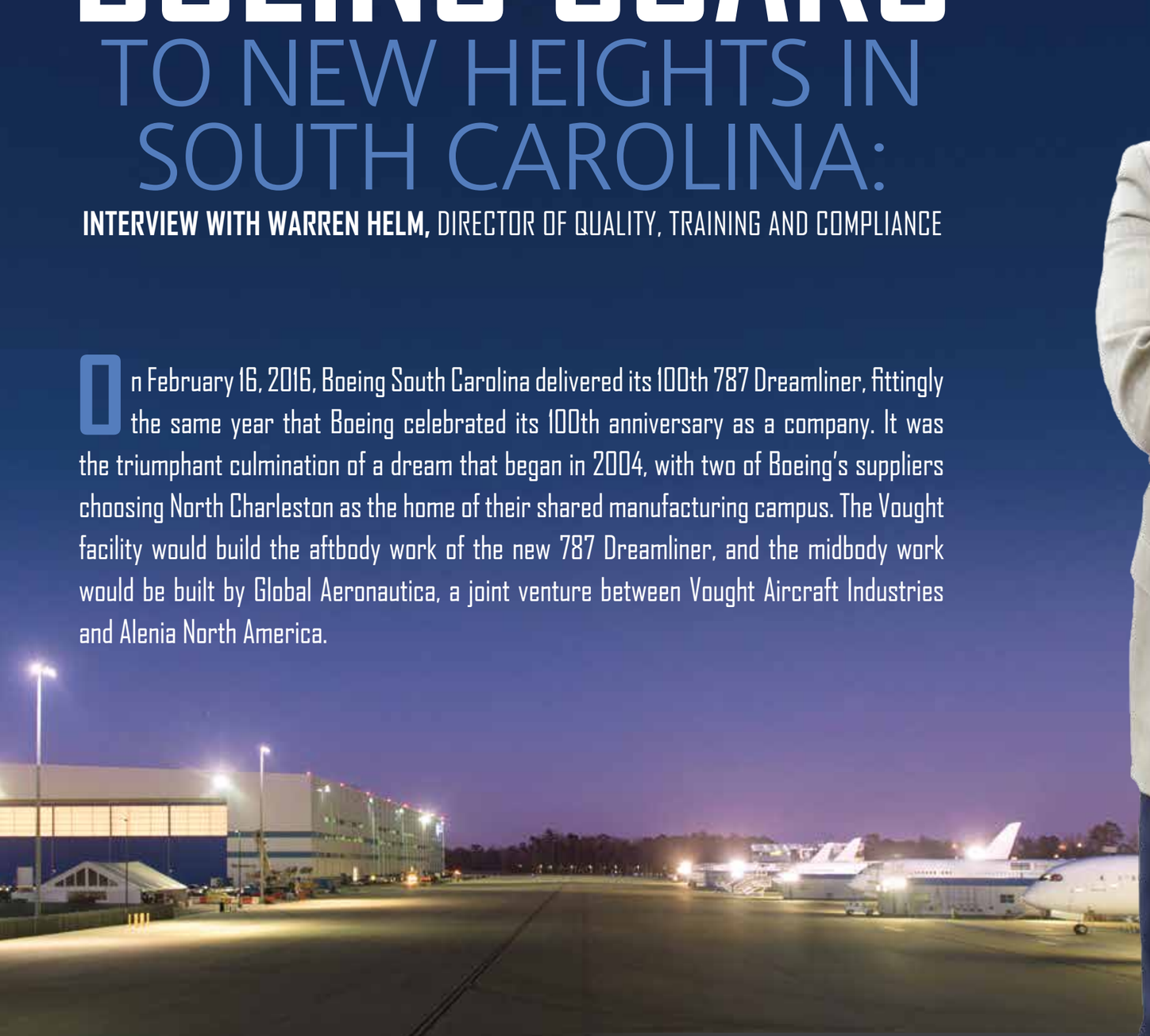
SOUTH CAROLINA'S **COMPETITIVE**
EDGE

AEROSPACE INDUSTRY

BOEING SOARS TO NEW HEIGHTS IN SOUTH CAROLINA:

INTERVIEW WITH WARREN HELM, DIRECTOR OF QUALITY, TRAINING AND COMPLIANCE

On February 16, 2016, Boeing South Carolina delivered its 100th 787 Dreamliner, fittingly the same year that Boeing celebrated its 100th anniversary as a company. It was the triumphant culmination of a dream that began in 2004, with two of Boeing's suppliers choosing North Charleston as the home of their shared manufacturing campus. The Vought facility would build the aftbody work of the new 787 Dreamliner, and the midbody work would be built by Global Aeronautica, a joint venture between Vought Aircraft Industries and Alenia North America.



Warren Helm, director of quality, training and compliance, Boeing South Carolina

Both facilities broke ground in 2006, and in 2007 the first aft and midbody sections of the 787 were completed and delivered to Boeing. In 2009, Boeing acquired both the Vought and Global Aeronautica facilities to create a single Boeing campus. Even more importantly, Boeing announced that it had chosen its North Charleston facility as the location for a second final assembly site for the 787 Dreamliner program.

Warren Helm, director of quality, training and compliance, looks back on the historic decision to build airplanes in South Carolina, and on the training and recruitment assistance that made it possible.

EDGE: *What can you tell us about the importance of Boeing's decision to come to South Carolina?*

Warren Helm: Very rarely do you get an opportunity to do a green-field startup site. This is a 100-year-old company, and this was a once in a generation opportunity. Making the choice to come to South Carolina was a monumental decision.

In April 2012, the first ever Boeing South Carolina-built 787 rolled out of the North Charleston facility, a huge accomplishment as it was Boeing's first twin aisle commercial airplane to roll out of a factory outside of Puget Sound [Washington]. In October 2012, Air India took delivery of the first Boeing South Carolina-built 787. That will go down in history books forever.

EDGE: *Tell us about Boeing's relationship with South Carolina's readySC™ program. How has it helped train and recruit the workforce that builds the 787?*

WH: I've been associated and affiliated with readySC even before Boeing decided to come to South Carolina through Vought and Global Aeronautica. We would not be where we are today without readySC. They have been absolutely essential to our success here. Let me give you a couple of data points: before it was Boeing, readySC had trained 1,600 employees for Vought/Global Aeronautica. Since it's become Boeing South Carolina, they have recruited and trained another 2,800 Boeing teammates. They've also conducted 51,000 training courses for us here on this site, and I'm going to say it again, much of this success is a result of readySC. They have been a true business partner for us.

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Boeing ROI

294
Boeing supplier/vendor locations in SC

$355 million
Boeing supplier/vendor spending in SC

More than 7,500
Boeing teammates in SC

More than $2 billion
invested in land, facilities, infrastructure and tools in SC since 2009

Approximately $50 million
invested in teammate training and development since 2010

Source – Boeing in the States (2015)

Aerospace ROI

Total economic impact of aerospace cluster in S.C.
$17.4 billion

Total jobs supported by aerospace cluster
More than 102,000

Total compensation for state aerospace cluster
$7.3 billion

Source – Aerospace in the Southeast: South Carolina and its Competitive Markets (2015)

The relationship that we have with readySC, the SC Technical College System and the state of South Carolina is probably unique to anywhere else in the company. In my opinion, this is the model for the rest of Boeing. We've got 16 technical colleges in the state, and are continually looking at how we can leverage, collectively, the entire System and its 16 colleges.

EDGE: *What do you see as the top positive outcome that readySC has helped to give your company?*

WH: Their ability to recruit and train. The complexity of getting high-skilled workers in aerospace, or any advanced manufacturing industry, is not easy. So readySC had the ability, they recruited, they screened, they trained, and they delivered to us what I would call a "service-ready" workforce. That is probably the number one biggest asset that they have.

EDGE: *What are your current workforce and production numbers? Any plans for future growth?*

WH: If you look at the current campus now, we have over 7,500 employees. The total 787 program is at 12 planes per month right now. When we talk about total program, we don't separate it between South Carolina and Everett, Washington. All of the aft and mid-body fuselages come out of South Carolina for both Everett and South Carolina final assembly. We assemble and deliver 12 aircraft a month, and we balance that out between Everett and South Carolina.

We are starting production of the 787-10, which is the newest model of the 787 and the largest one. That will be exclusively built at Boeing South Carolina, and will be the first Boeing commercial airplane in the history of our 100-year-old company to be built only in South Carolina. That's a really big deal.

EDGE: *Can you talk a little bit about Boeing's relationship with Trident Technical College?*

WH: Trident Technical College, under Dr. Mary Thornley's leadership, has been absolutely essential as well. We utilize parts of the Trident Tech campus

through our training with readySC, plus we contract Trident Tech to do our re-certifications. When I say certifications, what I mean is that the roughly 3,500 production employees on this site have to hold a certain number of certifications annually or bi-annually that allow them to perform processes on the airplane. They hold, collectively, about 50,000 certifications. We pay Trident Tech a fee to help do those certifications, and it is a wonderful partnership. We don't have this model to this magnitude anywhere else in the company.

EDGE: *You've recently started working with Apprenticeship Carolina™ to build an apprenticeship program – how is that going?*

WH: Apprenticeship programs have a long history with The Boeing Company. We have just started our first youth apprenticeship program through Trident Tech and Apprenticeship Carolina. We started slow because we were laser-focused on getting the workforce hired, getting them trained and getting to our production rates. So, now it's about looking out for the next 5 to 10 years and ensuring that we have a proper pipeline for the future.

EDGE: *If you could come up with a word or phrase to best describe your relationship with readySC, what would you choose?*

WH: A true business partner. readySC has not been a traditional service provider. They are a Boeing partner, and we have a relationship with them, just as if they were a part of our team. That relationship is critical. We can just pick the phone up and say, "we need this." And in turn they can pick up the phone and say, "we need you to do this to help us." It's just been a wonderful relationship and journey along the way.

continued on next page

December 1, 2004: Vought Aircraft Industries, a Boeing supplier, announces the selection of North Charleston, South Carolina as the site for its 787 Dreamliner aft fuselage component manufacturing facility. It also announces a 50/50 joint venture with Alenia North America, named Global Aeronautica, LLC, to be established in North Charleston in support of midbody fuselage production for the 787.

February 7, 2005: Vought breaks ground on the new 787 aft fuselage production facility.

October 8, 2005: Global Aeronautica, LLC, erects the first steel for their new 787 midbody fuselage assembly facility, adjacent to the Vought facility in North Charleston.

June 8, 2006: Grand opening of Vought Aircraft Industries manufacturing facility.

November 7, 2006: Vought begins production on its first aft fuselage.

December 5, 2006: Grand opening of Global Aeronautica's midbody component assembly facility.

May 2007: Vought and Global Aeronautica deliver the first major structures for the 787 Dreamliner to Everett, Washington, via the Dreamlifter. Aft on May 8 and midbody on May 15.

"I strongly recommend readySC to any company that is looking to come to South Carolina."

— WARREN HELM, DIRECTOR OF QUALITY, TRAINING AND COMPLIANCE

BOEING

EDGE: *Would you recommend readySC to another company thinking of coming to the state?*

WH: It would be a definitive yes. We would be here, but we would not be as far along in our journey without readySC right now. The services, the quality, the relationship that we have with them has just been world class. I strongly recommend readySC to any company that is looking to come to South Carolina.

EDGE: *Thanks so much. Is there anything else that you'd like to add?*

WH: People talk about the impact that Boeing has had. I've heard it referred to as the "Boeing Boost," and the reality of it is that the presence of Boeing in this community means "a strong Boeing is a strong community." Our employees here at Boeing South Carolina today, if we do this right, their children could work here someday, and their grandkids could work here someday. Boeing is a 100-year-old company. We have 4th and 5th generation Boeing employees that work for this company. We want to not only make The Boeing Company better, but this whole state. South Carolina is a wonderful place to do business.■

AN **INSTRUCTOR'S** PERSPECTIVE

INTERVIEW WITH ILLYA "COOP" COOPER, LEAD INSTRUCTOR FOR READYSC

Contributing to Boeing's success in South Carolina is a skilled team of readySC™ and Trident Technical College instructors. Illya "Coop" Cooper, who spent 20 years in the Air Force as an aircraft technician before becoming lead instructor for readySC, describes training for Boeing and how the experience has expanded South Carolina's capacity to train future aerospace companies.

EDGE: *What types of training are you doing for Boeing?*

Illya "Coop" Cooper: We do pre-hire and post-hire, as the training progresses. We train on all aspects of the job as the employees go through different phases of training.

We start off with structures training, where they learn how to drill holes and how to make sure that the quality of the metal is proper. In our sealant course, they learn how to apply sealant for different aspects of the airplane. In bond and ground, we show them how to make the aircraft safe electrically. If the process progresses, then they'd go to electrical and systems types of training. So we take care of just about every aspect of the airplane.

EDGE: *The Boeing 787 is built largely of composites – how is that covered in training?*

Coop: We stress how to use composites safely without damaging them. A lot of mechanics that come here may be used to a more traditional aluminum aircraft, but this is a different technique. So we have to teach them the proper way of dealing with composite materials, such as the surface of the composite and drilling of the holes. We have to take care to show them the correct way to do it—the Boeing way of doing it.

EDGE: *Do the training courses mix classroom and hands-on experience?*

Coop: It depends on what area of the plant that you're going to. That usually determines what level of training you get. Every course has a classroom aspect, and the majority of them have a hands-on segment. Normally, you are required to pass the written test, then you go on to the hands-on portion, which you then have to pass before you can go out to the plant.

EDGE: *Once they've gone through the readySC training, how prepared do you think your trainees are when they start on the plant floor?*

Coop: I think they're extremely prepared. Obviously, they're going to have to have some on-the-job training

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July 7, 2009: Boeing announces agreement to acquire Vought Aircraft Industries' operations in South Carolina. The facility is named Boeing Charleston, later renamed Boeing South Carolina (BSC).

October 28, 2009: Boeing announces that it has chosen its North Charleston facility as the location for a second final assembly site for the 787 Dreamliner program.

December 22, 2009: Boeing announces the acquisition of Alenia North America's interest in Global Aeronautica. Boeing is now the sole owner of Global Aeronautica and will integrate the facility with the rest of its organization in North Charleston, S.C.

June 10, 2011: Boeing officially opens the new South Carolina 787 Final Assembly facility.

April 27, 2012: Boeing rolls out first 787 Dreamliner built in South Carolina.

to get the final process down, but from what we've heard, they can often go straight to the floor.

EDGE: *How long is the training?*

Coop: It can be as little as a couple of weeks, or up to two and a half months. It depends on the needs of the plant.

EDGE: *What feedback do you get on your training?*

Coop: We hear all the time how grateful our trainees are for being so well-prepared for the plant floor. We also hear formal praise from the managers.

EDGE: *How close is that relationship between the training team and the Boeing production team?*

Coop: It's extremely close. We're ready to respond when they need us, and they're willing to provide us with everything that we need to do the training.

EDGE: *Any final thoughts on Boeing?*

Coop: It's great working with them. Their management is totally on board, and I think it's a great partnership.

EDGE: *Because of the Boeing experience, how prepared do you think readySC is to work with other aerospace companies?*

Coop: I think the fact that we have worked with Boeing for so long, and at times have had hundreds of people come through our training at a time that it would be no problem transitioning to another company. readySC knows how to be responsive to an aerospace company's needs, and we can handle just about any training situation that comes up.■

A **TRAINEE'S** PERSPECTIVE

INTERVIEW WITH THOMAS "CLIFF" LYNN, BOEING QUALITY INSPECTOR AND READYSC TRAINEE

Thomas "Cliff" Lynn talks about the readySC™ training program and how it prepared him to be a quality inspector at Boeing South Carolina.

EDGE: *Tell us about your career at Boeing.*

Thomas "Cliff" Lynn: My Boeing career began 4½ years ago as an aircraft manufacturing technician. Now I'm a quality inspector, and I inspect products and materials to ensure they are built to our exacting specifications. It's a crucial and challenging position at Boeing.

EDGE: *What are some of the different types of training that you initially received from readySC?*

Cliff: Aircraft Manufacturing Technician Program, Quality Assurance Program, Sweep and Fill Composite Repair, Roto-Peen Repair, Sealant Essentials, Seal: Inspection, Electrical Bonding Type VII, Bond & Ground Resistance Measuring Type I, Oxygen Type III Inspection, Quality Tool Certification, Inspection of Terminals and Splices, Fiber Optic Inspection and 787 FOD Qualification.

EDGE: *What are some specific skills that you learned from readySC training and how well have they prepared you for success at your current job?*

Cliff: I learned so many skills through my readySC training – from drilling perfectly rounded holes, to working with carbon fiber and conducting quality inspections.

The training I received through readySC was invaluable. It prepared me for the job I am doing today. The facility at Trident Tech features state-of-the-art tools and equipment that help students obtain hands-on experience that's relevant to aerospace jobs today. The readySC instructors have a vast amount of knowledge and experience, and low classroom ratios allow students to receive one-on-one instruction.

EDGE: *If you could describe readySC in one word or phrase, what would it be?*

Cliff: readySC is first-class.

EDGE: *Would you recommend readySC training to another person looking for employment? If so, why?*

Cliff: Absolutely – readySC's training programs prepare students with the skills and knowledge needed in the aerospace sector today.

EDGE: *Any final thoughts on the readySC program and what it has meant to you?*

Cliff: readySC is one of the best-managed programs I have experienced. As a lifelong South Carolinian, readySC is an excellent example of the state and private sector working together. It's a win-win for our state.■

November 12, 2013: Boeing breaks ground on its new Propulsion South Carolina facility.

December 12, 2013: Boeing announces it will expand Boeing Research & Technology presence in South Carolina.

December 13, 2013: Boeing announces expansion plans for South Carolina to include a new paint facility, a new fire station, and a second autoclave to be used in aftbody fabrication.

June 24, 2014: BSC Final Assembly reaches its planned three airplanes per month build rate.

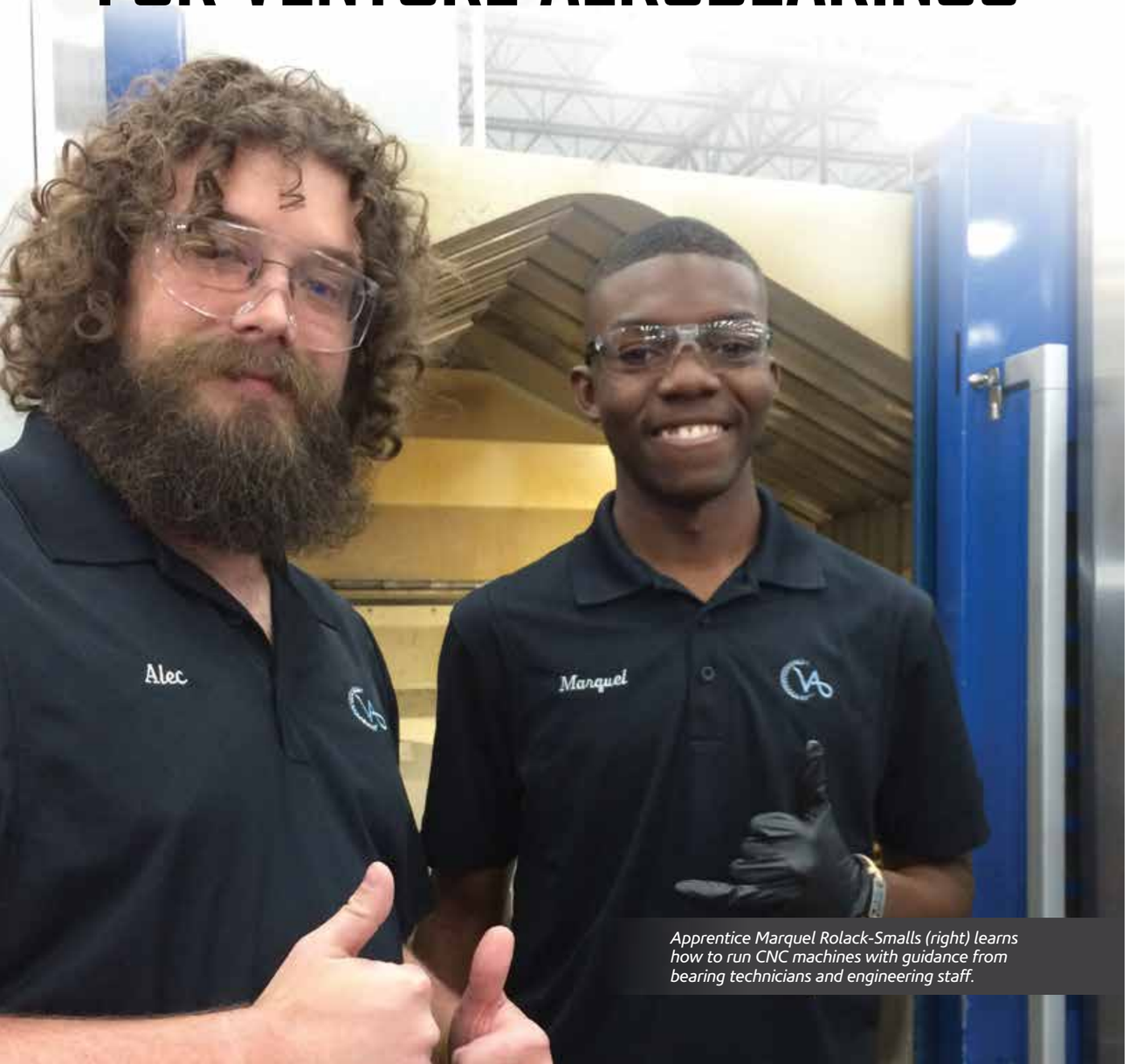
July 11, 2014: BSC breaks ground on new 787 Dreamliner paint facility.

January 26, 2015: The first BSC-built 787-9 Dreamliner rolls out from Final Assembly to the flight line.

February 11, 2015: Boeing officially opens its new Propulsion facility in South Carolina.

February 16, 2016: The 100th 787 Dreamliner built in South Carolina is delivered to American Airlines.

YOUTH APPRENTICESHIP IS A BIG WIN FOR VENTURE AEROBEARINGS



Apprentice Marquel Rolack-Smalls (right) learns how to run CNC machines with guidance from bearing technicians and engineering staff.

APPRENTICESHIP CAROLINA SPOTLIGHT:

INTERVIEW WITH VANESSA DOS SANTOS

HUMAN RESOURCES GENERALIST, VENTURE AEROBEARINGS

EDGE: *Tell us a little bit about your company.*

Vanessa Dos Santos: Venture Aerobearings was established in 2007 as a joint venture between SKF and GE Aviation. We produce aerospace bearings for commercial aircraft engines. We are a "teaming" shop that consists of 70-plus employees. We truly believe in teamwork, and we think that encouraging everyone to share their thoughts and ideas is the best way to operate a world-class business.

EDGE: *What kind of apprenticeship program do you have?*

VDS: We currently have one youth apprentice who works on the production lines producing actual engine bearings. He runs the CNC machines under guidance from our bearing technicians and engineering staff. This role will give him a good baseline for pursuing his career goals in manufacturing.

EDGE: *What would you consider to be the top positive outcome of having an apprenticeship program?*

VDS: We take pride in introducing students to the manufacturing environment and showing them the skills and techniques necessary to produce something that people can and will rely on. As a business, it gives us an opportunity to showcase our shop and potentially develop future leaders.

EDGE: *Is there anything that you would you like to highlight about your apprenticeship program?*

VDS: Our apprenticeship program gives the student real-life experience running machines, adhering to quality standards, following a process, and working in a true team environment. Marquel Rolack-Smalls is an excellent student and has been a great addition to our team. He joined our team in August 2015, and has since been supporting our bearing technicians producing parts on our production lines.

EDGE: *Can you think of a word or phrase that best describes Apprenticeship Carolina™?*

VDS: "Experience is an essential piece of true learning." Our schools, especially our teachers, do a wonderful job of preparing our students for the real world, but pairing that learning in the classroom with real-life application magnifies that learning and gives the student an edge as he or she prepares for their career.

EDGE: *What do you like most about apprenticeship?*

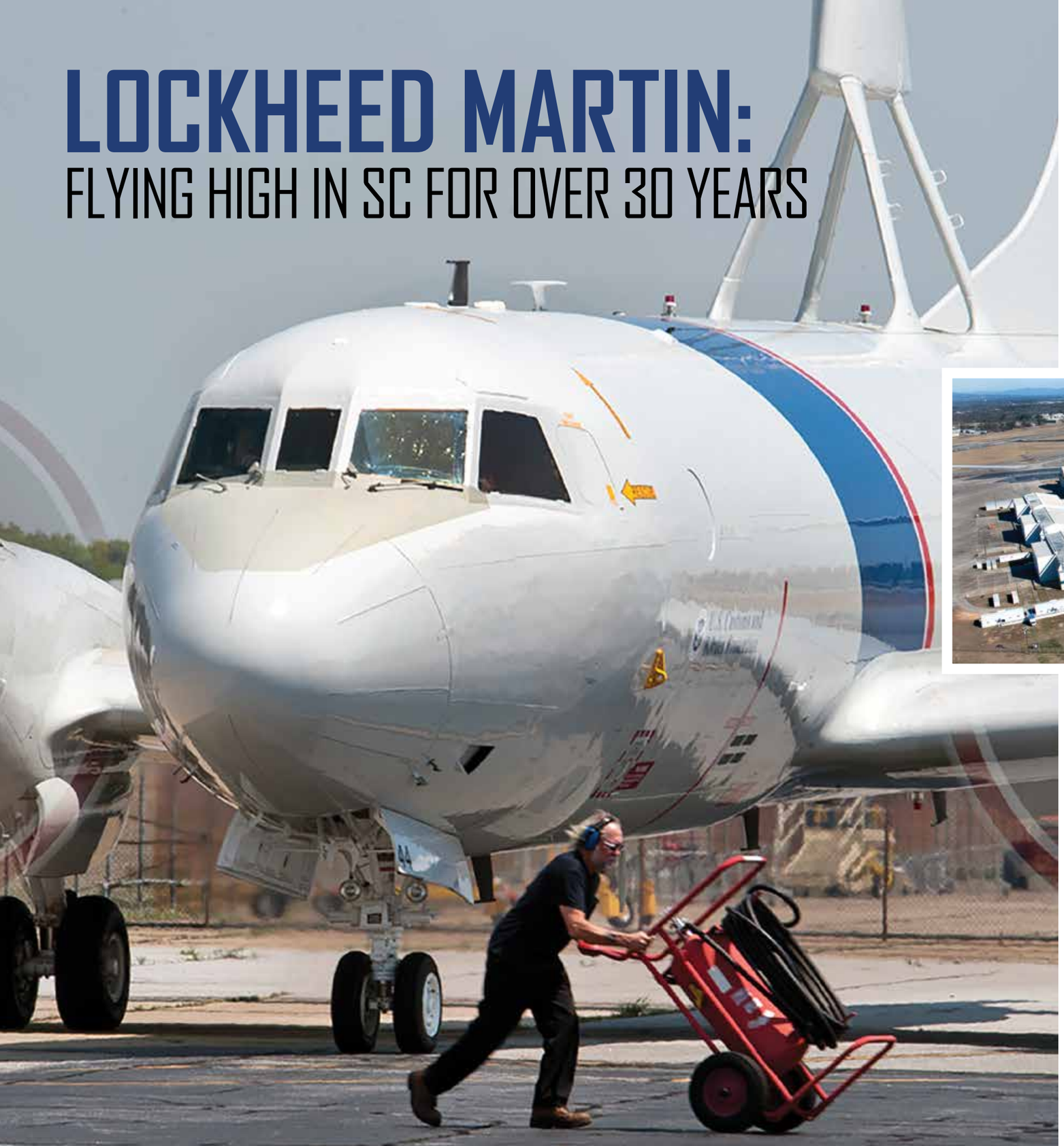
VDS: While our apprentice has hopefully learned a great deal from us, he has also brought a renewed sense of pride to our team and what we do. Sometimes we forget how awesome it is to produce parts for jet engines, and seeing him come in with such enthusiasm for working makes our teams that much better.

EDGE: *What is the best positive outcome of having an apprenticeship program?*

VDS: As businesses, we are always looking for top talent. Being a part of an apprenticeship program gives you an opportunity to build the future of not only your business but also manufacturing. Most importantly, it gives you an opportunity to have an impact on a young person's life, and that is truly the biggest win. ■

> "Being a part of an apprenticeship program gives you an opportunity to build the future of not only your business but also manufacturing."
>
> — VANESSA DOS SANTOS, HUMAN RESOURCES GENERALIST, VENTURE AEROBEARINGS

LOCKHEED MARTIN:
FLYING HIGH IN SC FOR OVER 30 YEARS



Lockheed Martin has thrived in South Carolina for over 30 years as one of the state's most enduring aerospace companies. In August 1984, Lockheed Aircraft Service Company established operations in Greenville, South Carolina, at what is now known as the South Carolina Technology and Aviation Center (formerly the Donaldson Center). The "Lockheed Aeromod Center" (LAC) was chartered to provide affordable, world class aircraft maintenance, repair, and modifications to domestic and international customers.

Through the years, LAC evolved into Lockheed Martin Aircraft Center and eventually into Lockheed Martin Greenville Operations.

The original footprint of the two hangars and one office building, located at the former U.S. Army Air Force base, quickly expanded to accommodate the influx of military and commercial aircraft. The inaugural team of 12 employees welcomed a P-3 Orion maritime patrol aircraft to the facility as the first aircraft in work.

Since then, the Lockheed Martin Greenville team has exponentially grown in workforce, delivered nearly 3,000 aircraft to customers worldwide, volunteered thousands of hours with local organizations, provided millions of dollars in philanthropic contributions, and has an annual economic impact of $100 million to the surrounding area.

Today, the site occupies 16 hangars on 276 acres and continues to provide nose-to-tail aircraft sustainment including modification, maintenance, repair and overhaul services for both military and civil aircraft. In addition, it was recently selected as the Final Assembly and Checkout (FACO) site to manufacture the company's T-50A aircraft offering in the U.S. Air Force's Advanced Pilot Training competition.

Over the past three decades, the site has provided world class and affordable sustainment services to thousands of aircraft such as the C-130, P-3, C-5, KC-10 and C-9.

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INTERVIEW: DON ERICKSON

LOCKHEED MARTIN GREENVILLE SITE DIRECTOR

EDGE: *Tell us about Lockheed Martin's workforce – what skills are needed?*

Don Erickson: We need a highly trained and skilled workforce: certified avionics, airframe, sheet metal and power plant technicians, structural and avionics engineers, and people with production control and procurement knowledge. Many of our employees have former military/aircraft maintenance experience.

EDGE: *Over the years, how has the SC Technical College System helped to provide your skilled workforce?*

DE: The Aircraft Maintenance Training program offered by Greenville Technical College is approved by the Federal Aviation Administration and Veterans Affairs and provides students with the technical, mechanical and academic skills required to become aircraft maintenance technicians.

This program has the potential to benefit the Greenville community by training men and women to be excellent aviation maintenance technicians, capable of working at a number of establishments in the market, thereby providing a good income for themselves and their families.

Since 2007, Lockheed Martin has been a consistent supporter of this program and has funded an endowed scholarship, originally established in the name of Lockheed Martin.

EDGE: *Do you foresee any new challenges that the SC Technical College System and readySC™ could help to overcome?*

DE: We foresee a number of opportunities in the near future where both Greenville Technical College and readySC can provide support. The two primary areas will be backfilling for an aging workforce and, more importantly, supporting any potential rapid staffing buildup as a result of competitive awards for the site.

EDGE: *If you were to recommend readySC and the SC Technical College System to another company, what would you say?*

DE: Both groups have demonstrated a responsive, flexible approach that successfully supports our dynamic business needs. We are grateful to be able to work with their teams.

EDGE: *Is there anything else you'd like to add?*

DE: We look forward to multiple opportunities in the near future. ■

LOCKHEED MARTIN

GKN: MAKING THINGS FLY IN SC

GKN Aerospace has been living up to its motto of "making things fly" in South Carolina since 2011. The British-based company's journey began with the announcement that it would invest $38 million in a new assembly plant in the state. Since completion, the GKN site in Orangeburg, South Carolina, has assembled aerospace components for various companies, including fuselages for Honda jets and floor grids for Boeing.

"We have been able to hire and train the personnel we need and are confident we will have future success as our facilities grow."

— DANIELE CAGNATEL, CHIEF EXECUTIVE OFFICER OF GKN AEROSPACE - AEROSTRUCTURES NORTH AMERICA

GKN AEROSPACE

The SC Technical College System and readySC™ provided invaluable assistance to the company's successful startup by recruiting, screening and training GKN's assembly technicians. In 2015, this success led to the business decision to open a second state-of-the-art facility adjacent to the original assembly plant. The new 126,000-square-foot facility will produce inlet lip skins for the Boeing 737 MAX and 777X.

In a statement, Daniele Cagnatel, chief executive officer of GKN Aerospace - Aerostructures North America, said that the choice to expand the Orangeburg site was influenced by the company's close proximity to Boeing, and by the quality of South Carolina's workforce. "We have been able to hire and train the personnel we need and are confident we will have future success as our facilities grow. GKN is proud to be a part of the South Carolina aerospace community."

GKN assembly technicians (above) receive a combination of pre-hire and post-hire training provided by readySC and Orangeburg-Calhoun Technical College.

90%
of commercial aircraft take off every day with technology from GKN Aerospace Engine Systems

100%
of all new large commercial aircraft use GKN Aerospace components

$38 MILLION
investment in Orangeburg County starting in 2011

INTERVIEW WITH BILL BEARD

VICE PRESIDENT AND GENERAL MANAGER OF GKN SOUTH CAROLINA

Bill Beard, who recently retired as vice president and general manager of GKN South Carolina, talked with EDGE *about how readySC and Orangeburg-Calhoun Technical College (OCtech) provide key components of the company's success.*

EDGE: *What would you like to highlight about the services that readySC and OCtech have provided for GKN?*

Bill Beard: We go through a pre-hire and a post-hire training process that's facilitated by readySC and OCtech. All of our assembly technicians, which is the predominance of our workforce, are trained through a combination of readySC and OCtech. It has been a great partnership for us. We've gotten great assistance from readySC in locating, screening and selecting candidates for going through the training. readySC provides the instructors who are very skilled and knowledgeable, and do a great job. They also help us in many ways to determine which of those candidates will be best suited for different types of work.

EDGE: *Do you have any specific examples of how readySC's training has contributed to your employees' long-term success?*

BB: Since we've opened the doors here, we've had a philosophy of promoting from within. We have examples of team members who have gone through that training, gone through that selection process, and started as assembly technicians to later advance through to quality inspectors. In three cases, they've become supervisors and in another case, a gentleman has gone through that process and is now in a quality engineer role.

EDGE: *What do you consider the top positive outcome of readySC's recruitment and training program?*

BB: That's an easy one. It is that we are able to bring in team members who are ready to go to work on the first day. They'll go through an internal training process as well, but we've got team members that are able to walk through the door, are safe, knowledgeable, and ready to go to work on Day One.

EDGE: *If you had to come up with one word or phrase that would describe readySC, what would that be?*

BB: That's another easy one: "partner."

EDGE: *If given the opportunity to recommend readySC to another company, what would you say?*

BB: I would say that the state provides us a great resource that enables us to recruit, select, train, hire, and onboard team members in a fairly rapid process. I would recommend that anyone should use readySC.

EDGE: *Is there anything else you'd like to add about OCtech, specifically?*

BB: OCtech has also been a great partner for us. They dedicate classroom space. They work with readySC on the instructors, and they also provide instructors for some of the administrative-type pieces of work that are in that training curricula. Again, I can't say enough about both readySC and OCtech and the quality of people that we've gotten through their training program. ■

GKN Aerospace is one of the world's largest independent first-tier suppliers to the global aviation industry. With over 100 years of aerospace experience, the company supplies high-value, integrated assemblies in metallic and composite materials for both military and civilian aviation markets. It employs approximately 17,000 people in more than 62 locations across three continents.

AMT SOUTH CAROLINA: DISCOVERING THE KEYS TO SUCCESS

From large companies that require a workforce of thousands, to smaller companies that need fifty or less, readySC™ is there to recruit and train the right workforce for the job. An effective Discovery trip can be a key component to defining those needs. Dan Guzman, general manager and senior program manager of AMT South Carolina, talks about how readySC's initial Discovery trip helped customize a successful training program for his company.

EDGE: *Please tell us about AMT South Carolina: its history in the state and any plans for growth.*

Dan Guzman: AMT South Carolina is an expansion facility of Washington-based Senior Aerospace AMT. The company came to South Carolina as a Boeing supplier, with primary operations focused on the assembly of structural components supporting Boeing 787 production. Our facility started with an existing statement of work that we were delivering to the area already. Our primary focus in opening the facility was to provide value-added support to Boeing with reduced lead times, point of use and just-in-time deliveries, and the potential for new work opportunities. The facility begun operations in February 2015 and had our first deliveries to Boeing South Carolina in May 2015. Today AMT South Carolina is comprised of 26 team members with 22 being hired and trained from the local Charleston area. Plans for growth are predicated on new business coming into the facility with the potential to expand into machining operations.

EDGE: *How did the readySC program contribute to your company's successful startup?*

DG: The readySC program was a huge contributor to our successful startup of our facility. Prior to starting operations, readySC sent a team to Arlington, Washington, to survey our company's needs for training requirements for the new facility. A custom training program was developed with extensive collaboration between our Senior Aerospace AMT training department and readySC. There were strategic reviews of the program throughout the process to capture and implement improvements to the training program.

> "My personal experience is that the readySC training program works!"
>
> — DAN GUZMAN, GENERAL MANAGER AND SENIOR PROGRAM MANAGER OF AMT SOUTH CAROLINA

We utilized SC Works for the recruitment portion which identified and screened potential candidates. Once our new hires were selected, readySC provided a four-week training program covering both classroom and lab applications with a summary of results and progress. The result was a team of associates who were well-trained and proficient in the key skills that our operation required.

EDGE: *What was the top positive outcome of readySC's training program?*

DG: The greatest benefit to the program was the level of training received by our associates from readySC. The program being a "local" resource for training that aligned well to requirements of our existing company training program was very beneficial. The fact that readySC was at zero cost to the company, as part of the state's incentives to businesses in the area, was a great benefit to our budget.

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About Senior Aerospace AMT

Senior Aerospace AMT is a leading manufacturer of structural parts for the leading original equipment manufacturers (OEM's) and Tier 1 suppliers in the large business and regional jet markets. Their experience and capabilities span multiple segments of an aircraft, including the engine pylon, struts, wing box, wings, wheel well and the interior. Senior Aerospace AMT's success is based on utilizing proprietary manufacturing techniques to manufacture high-quality complex parts through cost effective production. Given its breadth of capabilities and strong customer relationships, Senior Aerospace AMT has substantial content on the aviation industry's most popular aircraft. These aircraft include Boeing (737, 747, 767, 777, 787), Bombardier Regional Jet and Gulfstream GV. Core competencies include 3, 4, and 5 axis precision machining of aluminum, and simple and complex assemblies for their customers.

Senior Aerospace AMT was founded in 1980 with operations in Arlington, Washington, and is part of Senior plc. Senior is an international manufacturing group with 33 autonomous and collaborative operations across 14 countries and over 7,000 employees. It is listed on the main market of the London Stock Exchange (symbol SNR). Senior designs, manufactures and markets high-technology components and systems for the principal original equipment producers in the worldwide aerospace, defense, land-vehicle and energy markets.

EDGE: *What would you like to highlight about your training program?*

DG: The training program was comprehensive, covering the key skills that we required for operation in our facility. The team hit the ground running with a good baseline skill set and certifications to complete the work. Key skills included: sealant applications, drilling and fastener installation, countersink, bearing and bushing installation, and bond and ground applications.

EDGE: *How well did the readySC program prepare your workforce for production?*

DG: My team members who completed the program have all done very well in applying what they learned to their day-to-day production tasks. They are excelling, growing in skills, and positively contributing to our business every day. We have promoted three members of the team to production lead positions that were graduates of the readySC/ Senior Aerospace AMT training program.

EDGE: *Can you think of a word or phrase that best describes the readySC program?*

DG: Some of the words that come to mind are: "partner, outstanding resource, extensive knowledge, professional, responsive to company goals and requirements, cost effective." readySC was an excellent extension of our existing training program. This was critical with our expansion facility being 3000 miles away from AMT Arlington.

EDGE: *If you were to recommend readySC to another company, what would you say?*

DG: My personal experience is that the readySC training program works! Taking the time to engage readySC, allocating and committing company resources to develop the program, and providing detailed, timely feedback on the success and misses will yield a comprehensive, customized training program that has a strong probability of meeting your key training objectives.

EDGE: *Is there anything else that you'd like to add?*

DG: The readySC team was professional with excellent experience in the area of skills we required for our manufacturing facility. The team was engaged and absolutely focused on the specifics of what our training needs were. The readySC program definitely was one of the key factors to our successful startup.■

BUILDING AEROSPACE TRAINING CAPACITY ACROSS THE STATE

The SC Technical College System is committed to supporting the state's growing aerospace cluster. To prepare for the escalation of training needed to provide a skilled workforce, **Trident Technical College (TTC)** will construct the S.C. Aeronautical Training Center on its Main Campus in North Charleston.

The $79 million facility will increase capacity to provide training for well-paying jobs in expanding advanced manufacturing industries that have diverse workforces and excellent upward job mobility. Barring delays, the college anticipates construction will be completed in 2019.

The S.C. Aeronautical Training Center will house the college's Aeronautical Studies academic programs as well as aeronautical training offered by the college's Division of Continuing Education and Economic Development and readySC™. The new facility will add more training space and increase efficiency by consolidating classrooms and labs now distributed across two campuses and five buildings into one location.

"For South Carolina to have the ability to absorb the workforce requirements of suppliers as well as Boeing, we need added capacity to train workers.

S.C. Aeronautical Training Center

This new facility will position our state to meet the needs of the rapidly expanding aerospace cluster," said Dr. Mary Thornley, president of Trident Technical College.

TTC's Aeronautical Studies programs currently prepare students for three tracks in the aviation industry: Aircraft Maintenance Technology (ACM), Aircraft Manufacturing (AMF) and Avionics Technology. These programs have helped TTC students gain employment with a variety of aerospace organizations, including:

- AMT South Carolina
- Boeing
- Cummins Diesel
- iLLSTREET, LLC
- Lockheed Martin
- PSA Airlines
- Safran Labinal
- SPAWAR
- TIGHITCO
- U.S. Army

Greenville Technical College

The Aircraft Maintenance Technology program at **Greenville Technical College (GTC)** is approved by the Federal Aviation Administration (FAA) and Veterans Affairs and provides students with the technical, mechanical and academic skills needed to become aircraft maintenance technicians. Graduates are qualified to take the FAA Airframe and Powerplant Technician Certification exams, and students consistently earn top scores along with the higher earnings this credential allows them to command.

GTC offers:

- Aircraft Maintenance Technology Associate in Applied Science
- Aviation Airframe Structure/Systems Certificate in Applied Science
- Aviation Powerplant Theory/Systems Certificate in Applied Science
- Avionics Maintenance Technology Certificate in Applied Science

More information about the programs and specific courses can be found at: ***www.gvltec.edu/amt/***

A unique feature of the AMT program is GTC's partnership with Embry-Riddle Aeronautical University, which gives students access to expanded educational opportunities in the aviation field. Bachelor's degrees in Aviation Maintenance Management, Professional Aeronautics, and Technical Management allow students to begin at GTC and finish at Embry-Riddle.

> "Graduates are qualified to take the FAA Airframe and Powerplant Technician Certification exams..."

Many students already employed with companies like Lockheed Martin, Honeywell, Stevens Aviation, General Electric, Greenville-Spartanburg Airport, Michelin and others, find this program can increase their skills and potential.

BUILDING AEROSPACE TRAINING CAPACITY ACROSS THE STATE

Horry Georgetown Technical College

Oceans of Possibilities

Horry-Georgetown Technical College (HGTC) offers a variety of courses (such as CNC, Robotics, Machine Tool) and programs in the latest manufacturing fields that feed the demand for machine operators and other machinist positions at companies like Boeing and other aerospace suppliers. These include:

- Machine Tool Operations
- Machine Tool Technology
- Advanced Welding Technologies

HGTC also has a partnership with the Pittsburgh Institute of Aeronautics (PIA) and their Aviation Maintenance program, which provides a specific pathway for students who want to work in the fast-growing aviation industry. The unique partnership with PIA enables the HGTC student to earn an Associate of Applied Science while learning the nuts and bolts of aircraft maintenance.

For more information, see: ***www.hgtc.edu/academics/academic_departments/Ocupational_Tech/Aviation_Maintenance.html***

Governor Nikki Haley interviews Latika Dickerson, who gained employment as a mechanic with Boeing after graduating HGTC and completing Boeing's readySC™ training program: ***www.readysc.org/testimonials/latika-dickerson-boeing.html***

BUILDING AEROSPACE TRAINING CAPACITY ACROSS THE STATE

TCL
It's Working.

The Technical College of the Lowcountry (TCL) started its aviation technology program in March 2013 with an Airframes and Powerplant (A&P) preparation course and a Federal Communications Commission (FCC) licensing course. Since then, it has transformed into a program focused on military aircraft mechanics wanting to translate their skills into a license useful in the private sector.

"To date, we have had 142 complete the A&P course and 112 complete the FCC course," said Sean Henrickson, TCL's director for military education. "We have also funded an additional 43 students that attained certified logistics associate and certified logistics technician credentials."

Nearly one-third of TCL's student population falls under the categories of active duty, reserve, guard, veteran or dependent. Programs and services have been designed, and recently expanded, to meet the needs of those students to be designated as a military-friendly school.

"We think it is important for the community to understand the programs here at the college that are helping our military population transition into skilled labor jobs in the Lowcountry," Henrickson said.

Through the aviation professional program, opportunities are available to gain licenses that facilitate employment at regional aviation giants such as Gulfstream and Boeing.

Graduates have been employed by Gulfstream Savannah, Boeing, GE Aviation, Hondajet, Sky Quest Aviation, Naval Aviation Depot and Wyle Defense, to name a few.

For more information, visit: ***www.tcl.edu/aviation***

Aviation Maintenance Certificate is a 17 credit hour program that thoroughly prepares experienced aircraft mechanics for attainment of their FAA Mechanic's license.

The ***Avionics & Electrical Technicians FCC Commercial Radio License Prep Course (EEM-265)*** will prepare military avionics technicians and radio/electronics repair technicians to attain their General Radiotelephone Operator (Elements 1, 3 & 8) FCC license.

OUR **UNIQUE** SOLUTION

From your initial start-up and early production goals to your organization's long-term growth strategy, South Carolina offers a comprehensive workforce solution custom-designed to meet your needs. Our internationally renowned programs — ***readySC***™ and ***Apprenticeship Carolina***™ — along with our robust ***technical college system*** provide the training and education necessary to build a competitive workforce ready for today's demands and tomorrow's challenges. Learn more at ***www.sctechsystem.edu***.

SC TECHNICAL COLLEGE SYSTEM

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